By allowing the President to withhold the grant of a license, the SCLA provides the President with a tool to encourage reciprocal landing rights by foreign governments before allowing foreign cables to land in the United States. Indeed, the legislative history of the SCLA demonstrates that the statute was intended to codify the long-standing Presidential practice of granting or denying cable landing licenses based upon the willingness of foreign countries to extend reciprocal landing rights to U.S. carriers.[36/]

By enacting Section 308(c) of the Communications Act,[37/] Congress intended to allow the Commission to encourage similar reciprocity in foreign countries by imposing restrictions or conditions upon radio communication licensees intending to provide radio services between the United States and any foreign country, in order to "assure just and reasonable rates and service."[38/]

36/ The United States has insisted on such reciprocity for more than 125 years. The first time the issue of a cable landing license arose was in 1869, when a French cable company, "enjoying certain monopolistic privileges in France with respect to communications between that country and America," sought to land a cable in the United States. 61 Cong. Rec. H1540 (daily ed. May 18, 1921). President Grant insisted, however, that before a license could be issued, the monopolistic features of the French grant had to be abandoned, and the U.S. companies granted reciprocal rights to land cables in France. Other Presidents followed President Grant's policy of insisting on reciprocal landing rights. See Permit of Deutsch-Atlantische Telegraphen Gesellschaft, of Germany (May 27, 1899), reprinted in Cable Landing Licenses: Hearings before a Subcommittee of the Committee on Interstate Commerce, United States Senate, S. 4301, 66th Cong., 3d Sess. 7, 12-13 (1921) (President McKinley imposing reciprocal access conditions on a German carrier seeking cable landing rights). Practically all other cable landing permits issued from 1887 until the 1921 SCLA contain similar reciprocal landing conditions.

37/ The language of the SCLA was originally referenced in § 10 of the Radio Act of 1927, ch. 169, § 10, 44 Stat. 1162, 1166 (1927). Although Congress repealed the Radio Act of 1927 when it enacted the Communications Act of 1934, it incorporated substantially identical language regarding radio communication into Section 308(c).

38/ 47 U.S.C. § 308(c).

By proposing to establish "a uniform framework for evaluating applications by users in the United States for authority to access satellites licensed by other countries" and to "encourage foreign governments to open their satellite communications markets," the Commission in the DISCO-II rulemaking is proposing action directly in accordance with its authority under Section 308(c).[39] Indeed, the Commission has already used Section 308(c) to regulate the ability of domestic earth station licensees to utilize foreign satellites to provide radio communication services to a foreign country. In Century III Orlando, Florida, Inc. et al.,[40] the Commission granted a variety of applications regarding transborder services between the United States and Canada, Mexico, Latin America, and the Caribbean, except those applications regarding services to Canada through the Canadian Anik satellite system. Citing Section 308(c), the Commission withheld authority to use the Anik satellite system until the applicants submitted satellite operating agreements, and the United States had concluded its transborder service negotiations with Canada.[41]

Thus, the Commission has used its authority under Section 308(c) to restrict the ability of domestic carriers to utilize satellite systems that have been licensed by another country. Moreover, the Commission has previously cited Section 308(c) in two other rulemakings in implementing decisions based on reciprocity.[42] Accordingly, there should be no question that the Commission has

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[39] DISCO II NPRM ¶ 1.

[40] 5 FCC Rcd 3150 (1990) (International Facilities Division) ("Century III").

[41] Id. at 3155. See also Eagle Uplink Corp., 5 FCC Rcd 6671 (1990) (International Facilities Division) (similarly utilizing Section 308(c) to withhold authority from domestic earth station licensees to use the Canadian Anik satellite system).

[42] See Regulatory Policies and International Telecommunications, 2 FCC Rcd 1022, 1029 n.78 (1987) (stating that Section 308(c) gave the Commission the authority

(continued ...)

properly asserted authority under Section 308(c) to formulate rules for the use of non-U.S.-licensed satellite systems.

B. The Commission Properly Proposes To Treat The MSS Market As A Distinct Market

The Commission proposes to permit non-U.S.-licensed satellite systems "to enter the U.S. market for those services that can be competitively offered abroad by U.S. satellites, but not for other satellite services."[43/] Furthermore, the Commission proposes to divide satellite services for purposes of market entry analysis into three areas -- MSS, fixed satellite services ("FSS"), and direct-to-home satellite services ("DTH") -- without further subdividing service categories.[44/] Motorola and Iridium fully support this approach.

As elaborated below, the essential characteristic of GMPCS is the mobility of earth stations, a characteristic not shared by other satellite services. GMPCS customers (and particularly roaming customers) will choose the system(s) to which they subscribe based on the ability to transport and use the system's earth stations globally -- making global market access central to the viability of a GMPCS system. Moreover, these characteristics apply to all MSS/GMPCS services, including voice, data, and facsimile Therefore, Motorola and Iridium also support the

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42/ (... continued)
to "apply the reciprocity standards of the CLLA to applications for a license to operate a radio station for communications between the U.S. and any foreign country"); Market Entry and Regulation of Foreign-affiliated Entities, 10 FCC Rcd 5256, 5294 n.77 (1995) (stating that Section 308(c) authorized the Commission to consider reciprocal treatment when evaluating applications of common carrier radio station licensees providing international services). Of course, Section 308(c) applies to non-common carrier radio station licensees as well

43/ DISCO-II NPRM ¶ 33.

44/ Id. ¶ 34.

Commission's proposal not to distinguish between types of MSS unless other countries make such distinctions.[45]

In addition, Motorola and Iridium agree that, consistent with the DISCO-I Order,[46] it is appropriate not to have a "rigid distinction between international and domestic service" by non-U.S.-licensed MSS systems,[47] and for the Commission to make a single decision whether a non-U.S.-licensed MSS system should be permitted to provide services originating or terminating in the United States.[48]

C. The Market For GMPCS Is Uniquely Global In Nature

The GMPCS market is uniquely global in nature, in a way the markets for other types of satellite services are not. The global character of GMPCS is defined by the fundamental characteristic of GMPCS earth stations and GMPCS users -- i.e., that they are mobile. A global GMPCS system has value for a user **precisely because** it can provide services around the globe. For example, a business traveler with an IRIDIUM® System handset will have access to voice and data telephony for a call between virtually any two points on earth -- whether it is made from Morocco to Washington, DC, from Malaysia to Singapore, or from a ski lift in the Swiss Alps to a ski lodge below.

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[45] Id.

[46] Amendment of the Commission's Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems, 11 FCC Rcd 2429 (1996) ("DISCO-I Order").

[47] DISCO-II NPRM ¶ 35.

[48] However, there is an important exception to this approach, as the Commission has recognized. As discussed in detail in section V.B below, the Commission should consider the issue of Inmarsat access to the U.S. market under the same standards that apply to other systems, except with respect to Inmarsat's statutorily-mandated international maritime services.

For GMPCS, it is not possible to define competitive opportunities on a route-by-route, U.S. to foreign destination basis. Because a U.S. subscriber to a Big LEO GMPCS system is purchasing the ability to communicate from anywhere on the globe to anywhere else on the globe (e.g., Brazil to India), GMPCS for the U.S. customer potentially involves **every** country-to-country route.[49]

Projected GMPCS usage patterns and principles of economic theory further demonstrate the global nature of the GMPCS market.

1. Projected Usage Patterns Demonstrate The Global Nature Of The MSS/GMPCS Market

The projected usage patterns of Big LEO GMPCS systems demonstrate the global nature of GMPCS. In general, the GMPCS product is a handheld telecommunications service that can be used anywhere in the world. More specifically, GMPCS usage patterns can be explained in terms of the two primary types of users that are projected for the IRIDIUM® System: "roamers" and "homers."

"Roamers" are the GMPCS users who will use the services outside of their home countries, on a variety of country-by-country routes. Market research by Iridium indicates that approximately 61 percent of its global subscribers, and about 75 percent of U.S. subscribers, will be roamers. However, this important segment of Iridium's market will only be realized if Iridium is able to offer the global market access that roamers will demand.

In large part, the high percentage of expected roamers in the GMPCS market is driven by the relative economics of MSS and terrestrial wireless services. Because GMPCS is likely to be significantly more expensive than terrestrial wireless

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[49] The analysis in this section applies with equal force to regional GSO MSS systems, but on a regional basis. As the MSS market develops, these systems may be attractive to users whose usage patterns involve roaming and use of services on the various country-to-country routes within the area of coverage of the individual regional system.

services, subscribers are not likely to abandon terrestrial wireless service in favor of GMPCS, but will purchase GMPCS handsets specifically for the purpose of roaming in areas where terrestrial wireless service is unavailable or incompatible with the user's home market standard. In fact, each Big LEO system intends to offer a dual-mode handset that can operate over either a terrestrial wireless system or using the satellite of that Big LEO GMPCS system. Thus, if a GMPCS system does not have broad market access, the value added (relative to terrestrial wireless) for users of GMPCS dual-mode handsets will be limited.

"Homers" are the GMPCS users who will use the services primarily within their home country. The proportion of homers will be significantly higher in developing countries with limited telecommunications infrastructure and limited availability of terrestrial wireless services. Iridium forecasts that 39 percent of its total subscribers will be homers, including, for example, 25 percent of subscribers in the United States, 80 percent in Brazil, and 64 percent in India. Market access is also critical to the homer segment of the GMPCS market for two reasons. **First**, GMPCS homers will be predominantly located outside of the United States -- Iridium expects only 16 percent of all homers to be U.S. subscribers. **Second**, these homers will be widely dispersed -- Iridium expects its subscribers will ultimately include homers in more than 200 countries.

In sum, the predominant mode of usage in the developing GMPCS market will be global roaming, which will depend on global market access. The homer segment of the GMPCS market will also be fundamentally global in nature. Accordingly, it is essential that the Commission take into account **global** market access opportunities for U.S.-licensed GMPCS providers in formulating an entry test for MSS in this proceeding.

2. Economic Theory Demonstrates The Global Nature Of The MSS Market

The argument for application of a global ECO-Sat market entry test to MSS/GMPCS systems also finds strong support in economic theory, in at least two areas: basic principles of market definition and the "network effects" theory.

a. Market Definition

A fundamental aspect of competitive analysis is the definition of the relevant market. To define a market, it is necessary to define both a product market and a geographic market.[50/] In the case of GMPCS, both the relevant product market and the relevant geographic market are plainly global in nature.

(1) Product Market

The MSS/GMPCS market is unique in that MSS/GMPCS is **itself** a global product. Global roamers who subscribe to a GMPCS system will be purchasing global handheld telecommunications. It is effectively impossible to analyze GMPCS except in terms of a global market, because a GMPCS system that provides services in only a few countries will have little or no value to most global roamers.

Moreover, in assessing the scope of a product market, the central consideration is the availability of substitutes. As the Supreme Court has stated, a "market is composed of products that have reasonable interchangeability for the purposes for which they are produced -- price, use and qualities considered."[51/] For the global roamers, there are no effective substitutes for GMPCS, and the reason for the absence of substitutes is the global nature of the services. In particular, terrestrial wireless systems do not offer the global mobility of GMPCS. As explained above,

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50/ See generally William M. Landes & Richard A. Posner, Market Power in Antitrust Cases, 94 Harv. L. Rev. 937, 960-72 (1981).

51/ United States v. E.I. Du Pont de Nemours & Co., 351 U.S. 377, 404 (1956).

global roamers will not subscribe to GMPCS as a substitute for terrestrial wireless services, but to obtain the global mobility that terrestrial wireless service does not offer.[52] In fact, the Big LEO GMPCS systems will provide a service that has never existed before.

By contrast, there are a variety of substitutes for FSS and DTH services. FSS faces strong competition from fiber optic wireline service. Moreover, even for customers who use FSS on a global basis, undersea fiber optic cables and regional FSS systems provide important alternatives on particular routes. Similarly, DTH faces competition from all other multi-channel video programming services, including cable and wireless cable, as well as broadcast television and VCRs.

(2) Geographic Market

In assessing a geographic market, "the area of effective competition [is] . . . the market area in which the seller operates, and to which the purchaser can practicably turn for supplies."[53] It bears repeating that the MSS/GMPCS market is plainly a geographically global market. Courts and commentators have found global markets where a purchaser can buy a good or service from suppliers distributed throughout the world.[54] The market for the services of a GMPCS system is a

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[52] MSS and terrestrial wireless will also not compete for wireless service to local users because of the significant price advantage of terrestrial wireless.

[53] Tampa Elec. Co. v. Nashville Coal Co., 365 U.S. 320, 327 (1961).

[54] See Gearhart Indus. v. Smith Int'l, Inc., 592 F. Supp. 203, 212 (N.D. Tex. 1984) (global market for certain oil field services where market participants "sell[] . . . in all the oil-producing regions of the world"), aff'd in part, rev'd in part, modified on other grounds, 741 F.2d 707 (5th Cir. 1984) ; Northeastern Educ. Television v. Educational Television Ass'n, 1991-1 Trade Cas. (CCH) ¶ 69,330 (N.D. Ohio 1990) (global market for educational programming); United States v. Eastman Kodak Co., 853 F. Supp. 1454, 1468 (W.D.N.Y. 1994) (worldwide market for amateur color negative film), aff'd, 63 F.3d 95 (2d Cir. 1995); cf. Landes & Posner, 94 Harv. L. Rev. at 963 ("if a distant seller has some sales in a local market, all its sales, wherever made, should be considered a part of that local market").

A variation of the network effects theory is the "hardware/software" paradigm, which is based on the principle that "[t]he benefit from consuming durable[] [goods] often depends on the consumption of supporting or complementary goods."[59] That is, a consumer will be more likely to purchase a durable "hardware" good (e.g., a digital audio tape player) if the "software" associated with the good (e.g., recorded music on digital audio tape) is plentiful. In the global MSS market, the "hardware" is a handset and subscription for a particular global MSS system and the "software" is the ability to use the handset in numerous countries. In fact, Katz and Shapiro identify the strikingly similar model of "credit card networks (the card is the hardware, merchant acceptance the software)" as an example of the hardware/software paradigm.[60]

The significance of the network effects hardware/software paradigm in the MSS market is plain. Global roamers will be willing to subscribe only to those global MSS systems that have broad access to a large number of national markets. If foreign countries act to exclude U.S.-licensed MSS systems from their markets, they will effectively destroy much of the economic value of these systems.

Furthermore, unless there is non-discriminatory market access to national markets for global MSS systems, there is a significant risk of reduced competition because of the risk of "tipping":

> In markets with network effects, there is a natural tendency toward de facto standardization, which means everyone using the same system. Because of the strong positive-feedback elements, systems markets are especially prone to "tipping," which is the

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[59] Church & Gandal, 40 J. Indus. Econ. at 85.

[60] Katz & Shapiro, 8 J. Econ. Perspectives at 94.

> tendency of one system to pull away from its rivals in popularity once it has gained an initial edge.[91]

In order to avoid the reduction in competition that would result from tipping, the Commission should adopt a market entry standard in this proceeding that promotes non-discriminatory global market access for all MSS systems.

Moreover, a recent article by Nicholas Economides and Charles Himmelberg provides support for the concept that:

> goods with network [effects] are often characterized by the existence of a **critical mass point**. That is, an equilibrium market for the good does not exist unless the installed base is greater than a minimum level.[92]

Furthermore, these authors suggest that:

> for many network goods, the critical mass is of significant size, and therefore for these goods small market coverage will never be observed -- either their market does not exist or it has significant coverage.[93]

Thus, the network effects theory strongly supports the adoption of a critical mass component as part of the Commission's global ECO-Sat test, as elaborated in the following sections.

D. The Commission Properly Proposes A Critical Mass ECO-Sat Test For Entry Into The MSS Market

The Commission proposes a market entry test for the MSS market, quoted above, that effectively takes into account the global structure of the MSS market

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[91] Katz & Shapiro, 8 J. Econ. Perspectives at 106; see also Neal R. Stoll & Shepard Goldfein, Horizontal and Vertical Issues Involving Networks, N.Y. Law J., Jan. 26, 1996, at 3 ("The existence of network externalities can result in a process known as tipping in instances of inter-network competition, through which network markets tend toward monopoly or inefficiency.").

[92] Economides & Himmelberg, in Toward a Competitive Telecommunications Industry at 47 (original emphasis).

[93] Id. at 50.

by considering effective competitive opportunities in foreign markets in terms of "critical mass." This section discusses the basic ECO-Sat test and explains why a critical mass component is an appropriate feature of the Commission's global ECO-Sat entry test for MSS.

1. The ECO-Sat Test Is An Appropriate Market Entry Test For Satellite Services

The Commission first articulated the effective competitive opportunities ("ECO") test in the Foreign Carrier Entry Order.[94] In that proceeding, the Commission explained the rationale for the ECO test in the context of foreign-affiliated common carrier entry to the U.S. market:

> **First**, the effective competitive opportunities analysis will increase competition by explicitly setting forth the critical factors for foreign carrier entry into the U.S. market. . . . The effective competitive opportunities test therefore facilitates and liberalizes entry into our market, creating new possibilities of well-financed competitors contesting for market share.
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> . . . In addition to promoting the potential for more vigorous competition, the criteria of the effective competitive opportunities analysis spell out a better approach to addressing the potential for foreign carriers (or their U.S. affiliates) to unfairly leverage their market power in the U.S. market.[95]

Both components of this rationale -- promotion of competition and protection of U.S. service providers from foreign market power -- are equally applicable in the

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[94] Market Entry and Regulation of Foreign-Affiliate Entities, 11 FCC Rcd 3873 (1995) ("Foreign Carrier Entry Order").

[95] Id. at 3884-85.

present proceeding. In fact, the basic standards adopted in the Foreign Carrier Entry Order apply directly to facilities-based common carrier satellite services.[96]

With respect to satellite services in general, the Commission in the DISCO-I rulemaking continued the process of increasing competition begun in the Foreign Carrier Entry Order by eliminating the Transborder Policy and Separate Systems Policy, and permitting all U.S.-licensed satellite system to provide both domestic and international satellite services.[97] Motorola and Iridium support this liberalization, as well as the Commission's proposals through the DISCO-II rulemaking to further increase competition by permitting entry into the U.S. market by non-U.S.-licensed satellite systems.[98]

Nevertheless, entry by non-U.S.-licensed satellite systems must be subject to appropriate competitive safeguards. In the DISCO-II NPRM, the Commission recognizes the unique competitive issues in the global satellite market, and proposes to adopt a modified version of the ECO test -- the "ECO-Sat" test -- that takes these factors into consideration:

> We propose a basic ECO-Sat framework that focuses on the effective competitive opportunities for U.S. satellites in (1) the "home market" of each non-U.S. satellite; and (2) some or all of the "route

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[96] Id. at 3939.

[97] See Amendment to the Commission's Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems, 11 FCC Rcd 2429 (1996) ("DISCO-I Order").

[98] By proposing to regulate U.S. market entry of non-U.S.-licensed satellite systems under Section 308(c) of the Communications Act in this proceeding, the Commission is following a course along the lines suggested by Motorola in the Foreign Carrier Entry proceeding. See Foreign Carrier Entry Order, 11 FCC Rcd at 3941 (referencing Motorola proposal that Inmarsat-P (i.e., I-CO Global) market entry be regulated under Section 308(c)).

markets" that the non-U.S. satellite seeks to serve from earth stations in the U.S.[69]

Motorola and Iridium support the proposed ECO-Sat test.

2. The Global Nature Of MSS Requires That The ECO-Sat Test For MSS Market Entry Include The Critical Mass Component Identified By The Commission

Just as the Commission has proposed for the satellite market in general to substitute the ECO-Sat test for the basic ECO test that is applicable to common carrier services, it has proposed to modify the ECO-Sat test for MSS "through simultaneous evaluation of effective competitive opportunities for MSS providers on a global or regional basis."[70] This adoption of a global ECO-Sat test for MSS is indispensable in view of the structure of the MSS/GMPCS market.

As discussed in some detail in sections II and IV.B above, the MSS/GMPCS market has uniquely global characteristics. Accordingly, the route-by-route approach of the basic ECO-Sat test is analytically incompatible with the structure of the market. Under the Commission's formulation, "route markets" are those markets "that the non-U.S. satellite seeks to serve **from earth stations in the U.S.**"[71] In the GMPCS market, a non-U.S.-licensed system that gains access to the U.S. market will not simply provide services between the U.S. market and other route markets. The system will offer a global package of services to U.S. subscribers, who will be able to use the non-U.S.-licensed system to communicate between any foreign countries to which the system has access, even if those countries' markets are closed to U.S.-licensed MSS systems. In fact, as noted above, MSS/GMPCS services for each individual user potentially involve **every** country-to-country route.

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[69] DISCO-II NPRM ¶ 18.

[70] Id. ¶ 47.

[71] Id. ¶ 18 (emphasis added).

A concrete example effectively illustrates the deficiencies of route-by-route analysis in the MSS/GMPCS market that is dominated by global roamers. Suppose that

- U.S.-licensed Big LEO systems have access only to the U.S. market and to the European Union markets;
- a non-U.S.-licensed Big LEO system has market access in the European Union, Asia, and Latin America; and
- the Commission licenses the non-U.S.-licensed Big LEO system to provide only service between the United States and the European Union markets.

Under this scenario, the U.S. market for U.S.-licensed Big LEO systems would be limited to homers in the United States and roamers who travel only to the European Union. By contrast, the non-U.S.-licensed system would be able to serve the same U.S. market segments but would also be able to serve U.S. roamers who travel to Asia and Latin America. In addition, the non-U.S.-licensed system would have an unfair advantage in competing for roamers based in the European Union and for homers in Asia and Latin America. Finally, the African countries would be strongly influenced to favor the non-U.S.-licensed system, because the GMPCS market would have tipped decidedly in favor of that system. There is little doubt that U.S.-licensed Big LEO systems would be unable to compete successfully under such conditions.

In sum, the Commission has correctly recognized that the ECO-Sat test for the MSS/GMPCS market must take a global approach, rather than the route-by-route approach. Motorola and Iridium support the Commission's decision to do so through a "critical mass" test.

E. Motorola And Iridium Propose A Critical Mass Test That Promotes Predictability And Ensures Effective Competitive Opportunities For U.S.-Licensed MSS Systems

Critical mass in the MSS/GMPCS market means that there is effective market access in a sufficient number of countries to make the benefits of access to those countries' markets for U.S. MSS/GMPCS providers outweigh the competitive risks of opening the U.S. market to non-U.S.-licensed satellite systems that may be able to operate in markets from which U.S.-licensed MSS/GMPCS systems remain excluded -- i.e., countries that are not a part of the critical mass. As discussed above, the global roaming of GMPCS subscribers[72] as well as the network effects theory,[73] indicate that critical mass in the MSS market constitutes a very significant portion of the potential global market.

The Commission has requested comments on "how to define the requisite 'critical mass' so as to combine the flexibility that is necessary for intelligent regulation with the certainty that is necessary for effective competition."[74] In accordance with these goals, Motorola and Iridium propose the following two-part critical mass test:

1. Basic presumption

   a. There is a rebuttable presumption of critical mass with respect to a non-U.S.-licensed MSS system if there are effective competitive opportunities for U.S.-licensed MSS systems to the home markets of the direct and indirect owners of the foreign system, including

      i. 80 percent of the home market countries of such direct and indirect owners, and

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[72] See section IV.C.1 above.

[73] See section IV.C.2.b above; Economides & Himmelberg, in Toward a Competitive Telecommunications Industry at 50 ("for many network goods, the critical mass is of a significant size").

[74] DISCO-II NPRM ¶ 47.

ii. 80 percent of the population of the home market countries of such direct and indirect owners.

b. There is a rebuttable presumption of no critical mass if the above conditions are not satisfied.

c. The existence of market access in particular countries would be determined under the de jure/de facto test proposed by the Commission,[75] with consideration of the components of market access that are essential in the MSS/GMPCS market:

i Licensing of various types of mobile services (e.g., voice, data, facsimile),

ii. Access to the sufficient spectrum for service provision and projected growth,

iii. Rights of interconnection to the PSTN,

iv. Transborder roaming by subscribers (i.e., licensing and customs rules that permit transportation of GMPCS handsets across national boundaries), and

v. Licensing of gateway earth stations.

2. The basic presumption regarding critical mass may be rebutted, based upon consideration of all relevant factors, including:

a. The importance of national markets in which there are not effective competitive opportunities for U.S.-licensed MSS systems:

i. as markets for provision of MSS (i.e., markets that are important for service usage by "roamers," and markets that have limited telecommunications infrastructure and are thus important markets for "homers"), or

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[75] See id. ¶¶ 39-42.

ii. as subscriber home markets (i.e., markets that are the home countries of significant numbers of roamers and homers);

b. Whether the non-U.S.-licensed system seeking access to the U.S. market has market access in countries to which U.S.-licensed systems are denied access; and

c. The nature of efforts of U.S.-licensed MSS providers in seeking market access in particular countries.

This proposed test would advance competition by establishing a clear standard for market entry. The "80 percent/80 percent" test would be exacting enough to encourage broad market access for U.S.-licensed MSS systems, and flexible enough to permit practical compliance by non-U.S.-licensed systems. The proposal of an 80 percent rule with respect to both countries and population is intended to recognize the adverse competitive effects of denial of market access in **either** a large number of small MSS/GMPCS markets or a smaller number of large MSS/GMPCS markets.

The proposed basic presumption (part 1 of the test) would take into account the fact that the governmental owners of a non-U.S.-licensed system, including indirect governmental owners, have significant control over market access in their home countries, but less control in other countries.[76] In this respect, the proposed test is **less exacting** than that proposed by the Commission in the DISCO-II NPRM, in which the Commission proposes a requirement of access to "some 'critical mass' of foreign markets," without regard to ownership interests in any particular country.[77]

Moreover, the proposed test would permit regulatory flexibility by permitting the Commission to adjust the basic presumption where warranted by the

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[76] Indirect owners can have the same financial interest in a satellite service provider as do direct investors. Thus, it is necessary that the test include indirect ownership to prevent attempts to circumvent the market access test through creative ownership structures.

[77] DISCO-II NPRM ¶ 47.

circumstances (under part 2 of the test). In the case of a non-U.S.-licensed MSS system with broad global ownership, satisfaction of the basic 80 percent of countries/80 percent of population test would alone be likely to give U.S.-licensed MSS systems effective competitive opportunities with respect to a substantial majority of the territory and population of the world. On the other hand, the application of the above test to a non-U.S.-licensed system with owners from only a few countries would be likely to involve more detailed analysis of the additional factors in the second part of the test, because of the larger number of countries to which these factors would be applicable.

F. Certain Other Considerations Are Important To The Market Entry Test For Non-U.S.-Licensed MSS Systems

In addition to the global ECO-Sat test described above, certain other considerations raised by the Commission in the DISCO-II NPRM are important to application of the market entry test for non-U.S.-licensed MSS systems. These include: (1) the availability of spectrum as a public interest factor; (2) the absence of discriminatory market access considerations in other countries for non-U.S.-licensed MSS systems; (3) the application of U.S. legal and technical requirements to non-U.S.-licensed systems; (4) the consideration of license applications by both U.S. and non-U.S. satellite systems in consolidated processing rounds; and (5) the need for regulation of the landline portion of MSS calls.

1. The Availability Of Spectrum Is A Critical Public Interest Factor

In the DISCO-II NPRM, the Commission identified a number of public interest factors outside of the ECO-Sat test, and stated that among these "spectrum availability and coordination considerations deserve special discussion."[78] The Commission "propose[s] to consider whether the licensing country of the

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[78] Id. ¶ 48.

non-U.S. satellite system will coordinate the spectrum for its system(s) with U.S. satellite systems (and with the rest of the world for non-geostationary systems) in good faith."[79] Motorola and Iridium concur that coordination of spectrum is a critical public interest factor in the MSS market.

In addition to this consideration, moreover, it is critical that the Commission consider whether foreign regulatory authorities -- including both national governments and supra-national regulators -- have allocated spectrum to MSS systems in a manner that supports fair competition in those countries' territories. As noted in section IV.E above, the Commission should also consider access to adequate spectrum as a segment of the de facto component of the global ECO-Sat test. Spectrum allocation and assignment are of critical importance whether they are considered as part of the ECO-Sat test or as independent public interest factors, because adequate spectrum access is fundamental to the operation of MSS/GMPCS systems (and other satellite systems).

The spectrum that has been assigned to U.S.-licensed Big LEO GMPCS systems, even in the United States, is quite limited. For example, under the Commission's Big LEO frequency-sharing plan, the IRIDIUM® System initially will operate in only 5.15 MHz of spectrum.[80] If foreign competitors of U.S.-licensed Big LEOs have major advantages in terms of spectrum access, they will be able to offer greater bandwidth to more subscribers at less expense, making fair competition in the GMPCS market very difficult.

In sum, the Commission should consider as part of its public interest analysis both the willingness of foreign administrations to coordinate spectrum through

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[79] Id. ¶ 49.

[80] Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, 9 FCC Rcd 5936, 5955 (1994).

the ITU process and the spectrum allocation decisions of national and supra-national regulators.

2. Licenses For Foreign-Licensed MSS Systems Must Be Conditioned On An Absence Of Special Market Access Concessions In Any Country

The best means of ensuring competition in the global MSS market will be for multiple MSS systems to have non-discriminatory access to all national markets. Inter-system competition will assure cost-based pricing and varied service offerings to MSS consumers. The global ECO-Sat test outlined above will further this goal by encouraging foreign countries to open their markets to U.S.-licensed MSS systems. In the interests of regulatory flexibility, however, the global ECO-Sat test proposed here does not require access to every market as a condition for a U.S. MSS license. Nevertheless, it should be a condition of such a license that the licensee not engage in action that affirmatively inhibits non-discriminatory access to global markets for U.S.-licensed MSS systems.

Specifically, the Commission should condition MSS earth station licenses on an absence of special concessions to the licensee for market access in any country. Such a limitation should be equivalent to the limitation that is imposed on U.S. Big LEO licensees, prohibiting them from:

> acquir[ing] or enjoy[ing] any right, for the purpose of handling traffic to or from the United States, . . . to construct or operate space segment or earth stations, or to interchange traffic, which is denied to any other United States company by reason of any concession, contract, understanding, or working arrangement to which the Licensee or any persons or companies controlling or controlled by the Licensee are parties.[81/]

[81/] 47 C.F.R. § 25.143(h); see also Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Band, CC Docket No. 92-166, ¶¶ 54, 55, 1996 FCC LEXIS 750 (Feb. 15, 1996).

The Commission discusses this important limitation in the DISCO-II NPRM, indicating that the limitation will help to prevent "unrestricted access to non-U.S. systems [from] adversely affect[ing] competition in the United States."[82/]

3. The Commission Should Require Non-U.S.-Licensed Satellite Systems To Comply With U.S. Legal And Technical Requirements

The Commission states in the DISCO-II NPRM that "it is critical that any foreign systems serving the U.S. market comply with the legal and technical requirements imposed on U.S.-licensed systems."[83/] Motorola and Iridium agree. Both to satisfy the technical concerns that are addressed by the Commission's regulations and to promote regulatory consistency and efficiency, non-U.S.-licensed satellite systems should be subject to the same technical requirements to which U.S.-licensed satellite systems are subject (e.g., out-of-band emissions, antenna size, etc.).[84/]

4. The Commission Should Concurrently Consider Applications From U.S. And Non-U.S. Satellite Systems In Consolidated Processing Rounds

In the DISCO-II NPRM, the Commission states:

> In order for non-U.S. satellite operators to compete with U.S. operators for the opportunity to serve the U.S. market, we propose to consider such applications, under the ECO-Sat standard, contemporaneously with U.S. space station applications in the processing round or other proceeding.[85/]

82/ DISCO-II NPRM ¶ 11.

83/ Id. ¶ 53.

84/ See 47 C.F.R. §§ 25.201, et seq.

85/ DISCO-II NPRM ¶ 16.

Motorola and Iridium support this proposal. In processing rounds including both U.S. and non-U.S. satellite operators, all applications should be subject to the same procedures, including those regarding mutually exclusive applications and clearing of occupied spectrum.

5. The Commission Should Limit Its Regulation Of MSS Providers To Licensing Of Earth Stations At This Time

The Commission has requested comments on whether it "should attempt to regulate MSS communications to or from the United States that do not involve radio communications within our borders."[96] Although the Commission is correct that regulation of only MSS radio communications will permit an MSS user in a market that is closed to U.S.-licensed MSS providers to make a call to the United States via the PSTN,[97] it is the view of Motorola and Iridium that such regulation is not necessary at this time.

It is sufficient under existing circumstances for the Commission to require operators of non-U.S.-licensed MSS systems to obtain Title III licenses to operate earth stations (including both mobile earth stations and gateway earth stations) in the United States. This level of regulation will effectively require a non-U.S.-licensed MSS system to obtain a license from the Commission before offering service in the United States or obtaining subscribers in the United States.

However, the Commission should reserve the authority to take appropriate action to block the landline portion of MSS communications under appropriate circumstances. Specifically, it is possible that other countries may seek to block landline communications from those MSS systems that the other countries do not permit to provide service in their markets. Under such circumstances, the Commission

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[96] Id. ¶ 46.

[97] Id. ¶ 45.

should revisit the issue of regulation of the landline portion of MSS communications, and take appropriate action.

V. THE MARKET ENTRY TEST FOR INMARSAT AND ITS SUBSIDIARIES, AFFILIATES, AND SUCCESSORS SHOULD BE THE SAME AS THE GLOBAL ECO-SAT TEST FOR MSS

The global ECO-Sat test discussed in the previous section is an appropriate and effective standard for promoting competition in the MSS/GMPCS market. It is appropriate that the Commission apply this test to **all** non-U.S.-licensed MSS systems, including Inmarsat (for non-maritime services) and its subsidiaries, affiliates, and successors.

A. The Commission Properly Proposes To Treat Subsidiaries, Affiliates, And Successors Of Intergovernmental Satellite Organizations In The Same Manner As Other Satellite Systems.

The Commission has correctly recognized in this proceeding that subsidiaries, affiliates, and successors of the intergovernmental satellite organizations ("IGOs") -- Intelsat and Inmarsat -- should be treated exactly like other non-U.S.-licensed satellite systems, because "if IGOs are to provide services in competitive markets, **they cannot be permitted to leverage the benefits of their intergovernmental status to unfairly distort competition.**"[99] Furthermore, the Commission has stated: "Although we do not intend to revisit existing authorizations to use Intelsat or Inmarsat, we do not believe that such authorizations should automatically transfer to these organizations' subsidiaries, affiliates, or successors."[99]

In the MSS market, these conclusions are literally inescapable. Other than Inmarsat itself, the only non-U.S.-licensed GMPCS system under development is

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[99] Id. ¶ 71 (emphasis added); see also id. ¶ 73.

[99] Id. ¶ 74.

I-CO Global, a commercial affiliate of Inmarsat. Furthermore, any privatized successor of Inmarsat should be an ordinary commercial entity (just like any other non-IGO satellite system) that receives treatment no different from that accorded to other MSS systems.[90] In addition, Inmarsat and I-CO Global have expressed long term interest in merging I-CO Global with a successor of Inmarsat.[91] In view of these circumstances, it is plain that failure to apply the global ECO-Sat test either to I-CO Global or to a privatized successor of Inmarsat would be an exception that swallows the global ECO-Sat rule.

B. The Commission Should Also Apply The Global ECO-Sat Test To Pending And Future Applications For U.S. Domestic Service By Inmarsat

Inmarsat itself, which is presently the only provider of global MSS, should not be the only MSS provider that escapes the global ECO-Sat test generally applicable to MSS. Motorola and Iridium disagree with the alternative tests for Inmarsat (and Intelsat) market entry proposed by the Commission.[92]

Motorola and Iridium do not challenge the Commission's conclusion that Inmarsat should be permitted to continue to provide international maritime MSS under existing authorizations.[93] In fact, it is the statutory purpose of Inmarsat under the

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[90] See Statement by the Representative of the Party of the United States of America, Inmarsat Doc. ASSEMBLY/11/23.

[91] See note 22 above and accompanying text.

[92] See DISCO-II NPRM ¶¶ 66-68.

[93] See id. ¶¶ 69, 70. This conclusion is supported by the conclusion that "Inmarsat should remain robust until global maritime distress and safety services ["GMDSS"] are provided by multiple private systems."

Maritime Satellite Act to provide "international maritime satellite communications services."[94]

However, the Commission has held that in the United States, Inmarsat may provide only those international non-maritime services that are "ancillary to and supportive of" Inmarsat's maritime services.[95] Moreover, Inmarsat lacks legal authority to provide land mobile satellite services, because the Land Mobile Amendments to the Inmarsat Convention have not entered into force.[96]

Furthermore, Inmarsat does not have authorization to provide U.S. domestic MSS on other than a temporary basis. These services are at issue in applications filed by COMSAT Corporation ("COMSAT") that are pending before the Commission.[97] Notwithstanding the Commission's tentative conclusion not to apply the standards adopted in this rulemaking to pending applications,[98] with which Motorola and Iridium disagree, Inmarsat's domestic services should be subject to the global ECO-Sat test that is appropriate for MSS in general, for several reasons.

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[94] 47 U.S.C. § 752(a)(1); see also 47 U.S.C. §§ 751(a), 752(b).

[95] See Petition of Motorola Satellite Communications, Inc. for Declaratory Ruling Concerning Participation by COMSAT Corporation in a New Inmarsat Satellite System Designed to Provide Service to Handheld Communications Devices, 10 FCC Rcd 7693, 7701 (1995); Provision of Aeronautical Services via the Inmarsat System, 4 FCC Rcd 6072, 6086-87 (1989) ("Aeronautical Services Order"). Motorola and Iridium have consistently maintained that the Maritime Satellite Act does not permit provision of non-maritime Inmarsat services in the United States. See, e.g., Brief for Intervenors, COMSAT Corp. v. FCC, D.C. Cir. No. 95-1057 (Dec. 15, 1995).

[96] See note 12 above and accompanying text. But see Communications Satellite Corp., 8 FCC Rcd 638, 640-41 (1993).

[97] Application of COMSAT Corporation to Provide U.S. Domestic Land and Aeronautical Mobile Satellite Services, File No. ITC-95-341; Application of COMSAT Corporation for a Blanket Radio Station License to Construct and Operate up to 5,000 PLANET 1 Mobile Earth Stations for Use Throughout the United States, File No. 1281-DSE-P/L-96.

[98] See DISCO-II NPRM ¶ 20.